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BRITISH HYDROID ZOOPHYTES.

VOL. II.

A
H I S T O R Y
OF THE
BRITISH HYDROID ZOOPHYTES.

BY
THOMAS HINCKS, B.A.

IN TWO VOLUMES.

VOL. II.—PLATES.

L O N D O N :

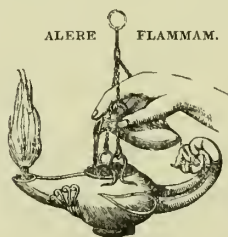
JOHN VAN VOORST, PATERNOSTER ROW.

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"Treasures the vulgar in their scorn reject."—CRABBE.

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The magnified detail has in almost all cases been drawn by the Author with the Camera lucida, to the same scale.



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PLATE I.

[*The figures which are not credited to any one else are drawn by the Author.*]

FIG.

1. CLAVA MULTICORNIS, page 2, natural size.
 - 1 *a*. The same magnified.—1 *b*. The planule. From drawings by Mr. Alder.
2. CLAVA SQUAMATA, p. 4, nat. size.
 - 2 *a*. A polypite of the same, magnified.
3. CLAVA CORNEA, p. 5, nat. size.
 - 3 *a*. A polypite, magnified.



PLATE II.

FIG.

1. CLAVA LEPTOSTYLA, p. 6, a group, of the natural size.
- 1 *a*. The same, magnified. After Agassiz, 'Contributions to the Nat. Hist. of the U. S.' vol. iv. pl. xxi.
2. TUBICLAVA CORNUCOPIÆ, p. 11, nat. size.
- 2 *a*. The same, magnified. After Alder.

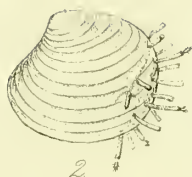


PLATE III.

FIG.

1. *TURRIS NEGLECTA*, p. 13, polypites, of the natural size.
 - 1 *a*. Polypites, magnified. After Wright.—1 *b*. A polypite in an earlier stage. After Gosse.—1 *c*. The medusiform zooid, magnified. After Forbes.
2. *CORDYLOPHORA LACUSTRIS*, p. 16, nat. size. After Allman.
 - 2 *a*. A polypite and a portion of the stem bearing a gonophore, magnified. The Author.
3. The gonozooid of *SYNCORYNE* (*SARSIA*), p. 49, magnified. The Author.



PLATE IV.

FIG.

1. *HYDRACTINIA ECHINATA*, p. 23, nat. size.
2. A group of the same (female), magnified.
3. A portion of the crust (magnified), showing an alimentary and fertile polypite, a spine, and the spiral and tentacular appendages. This figure is diagrammatic.
4. A polypite bearing male gonophores.
5. A monstrous polypite formed by the union of a sterile and a fertile zooid.
6. A polypite in an early stage of growth. After Quatre-
fages.

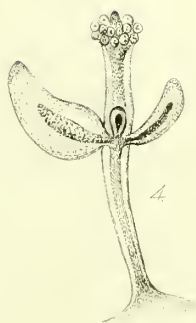
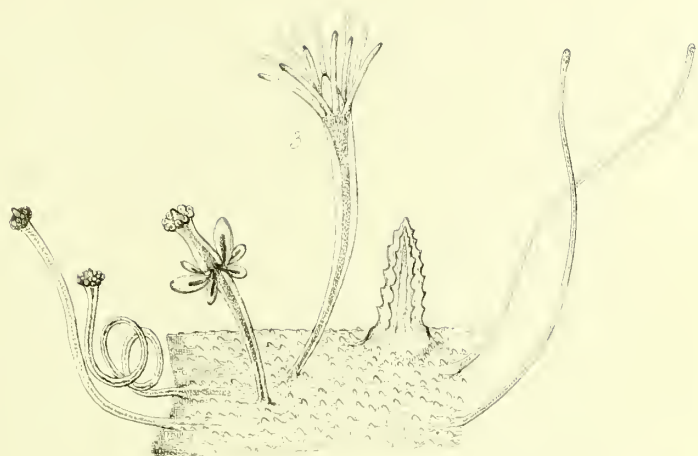


PLATE V.

FIG.

- a.* *PODOCORYNE CARNEA*, p. 29, nat. size.
- b.* A portion of a colony, magnified, with the base consolidated into a crust.
- c.* A portion of a colony, with a simple retiform base.
- d.* The gonozoid, magnified.
- e.* A polypite from the edge of the shell, with three of the spiral appendages.
- e'*. One of the spiral appendages.

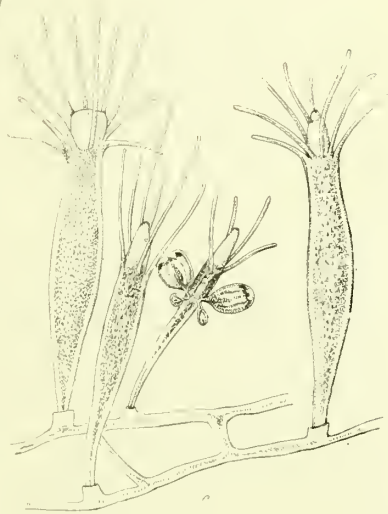


PLATE VI.

FIG.

1. *PODOCORYNE AREOLATA*, p. 32, on *Natica Alderi*, nat. size.

1 *a*. The same, highly magnified.—1 *b*. The gonozooid, magnified.—1 *c*. A portion of the spinous crust, magnified. After Alder.

2. *CORYNOPHYSIS ALDERI*, p. 34, polypites magnified.

2 *a*. The gonozooid.—2 *b*. The manubrium, showing the oral tentacles.—2 *c*. One of the bulbs, bearing the ocelli and marginal tentacles. After figures by G. Hodge, Esq.



1c



1d



1e



1b



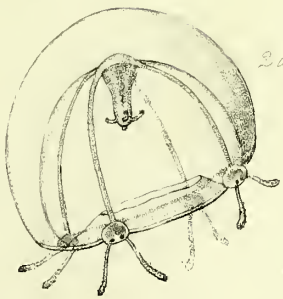
2b



2c



2d



2a

PLATE VII.

FIG.

1. *CORYNE PUSILLA*, p. 39, nat. size.

1 *a*. A polypite magnified.—1 *b*. A tentacle with the threads of the nematocysts exerted.

2. *CORYNE FRUTICOSA*, p. 44, nat. size.

2 *a* and 2 *b*. Polypites magnified.—2 *c*. A portion of the stem, magnified.

3. *SYNCORYNE SARSII*, p. 52, nat. size.

3 *a* and 3 *b*. Polypites, magnified.

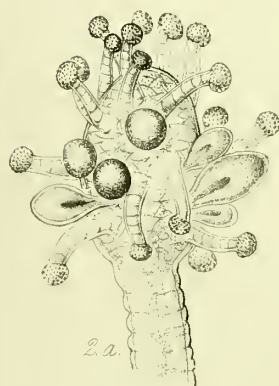
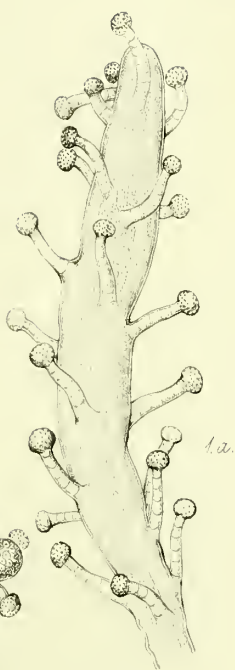


PLATE VIII.

FIG.

1. *CORYNE VAGINATA*, p. 41, nat. size.

1 *a* and 1 *b*. Polypites, magnified.—1 *c*. The cup-like expansion of the polypary at the base of the polypite.

2. *CORYNE VERMICULARIS*, p. 42, nat. size.

2 *a*. A polypite, magnified *.—2 *b*. A portion of the stem, magnified.

* All the enlarged figures of *Coryne* are drawn to the same scale, so as to exhibit the comparative size.

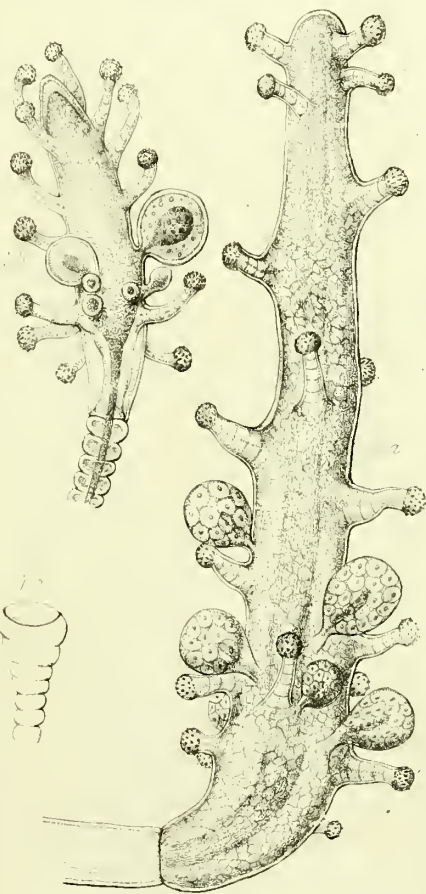
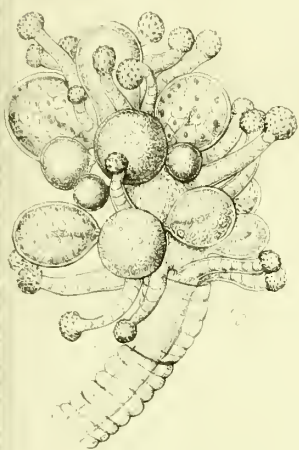


PLATE IX.

FIG.

1. *CORYNE VAN-BENEDENII*, p. 45, nat. size.

1 *a* and 1 *b*. Polypites, magnified.—1 *c*. A gonophore, highly magnified to show the structure and the contained embryo.—1 *d*. A polypite with gonophores, magnified.

2. *SYNCORYNE EXIMIA*, p. 50, nat. size.

2 *a*, 2 *b*, 2 *c*. Polypites, magnified.—2 *d*. A portion of a stem and branch.—2 *e*. A gonophore, magnified.—2 *f*. Annulated space at the base of the stem.

3. *ZANCLEA IMPLEXA*, p. 59, nat. size.

3 *a*. A polypite, magnified.—3 *b*. A portion of the stem, magnified to show the structure of the polypary.—3 *c*. The gonozooid. After Alder.—3 *d*. One of the tentacles of *Zanclea costata*. After Gegenbaur.

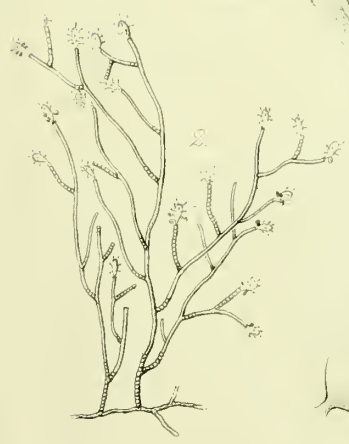
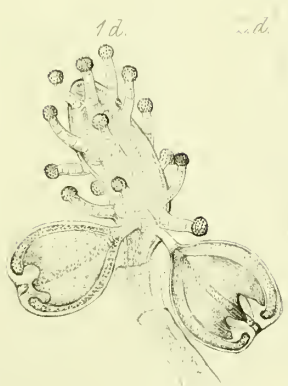
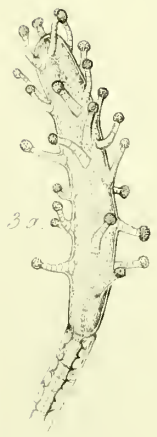
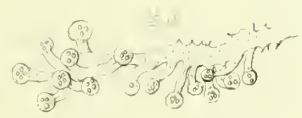


PLATE X.

FIG.

1. SYNCORYNE GRAVATA, p. 53, nat. size.

1 *a*. The same, magnified.—1 *b*. A single polypite, more highly magnified.—1 *c*. A polypite partially atrophied.—1 *d*. A polypite wholly atrophied, bearing two imperfect gonozooids (T. H.).—1 *e*. A gonozooid almost fully developed.—1 *f*. A female gonozooid, as it appears late in the breeding-season, laden with ova. All the figures of *S. gravata*, with the exception of 1 *d*, are after Agassiz, 'Contrib. to the N. H. U. S.' vol. iii. pl. xvii.

2. SYNCORYNE DECIPIENS, p. 56, polypites, magnified.
From a drawing by Mr. Alder.



PLATE XI.

FIG.

a. CLADONEMA RADIATUM, p. 62, nat. size.

b. A polypite, highly magnified.—*c.* The gonozoid, nat. size.—*c'*. Ditto, magnified.—*d.* Ditto, as seen from below.—*e.* One of the tentacles of the gonozoid.—*f.* The manubrium, showing the oral lobes. From drawings by E. W. H. Holdsworth, Esq.

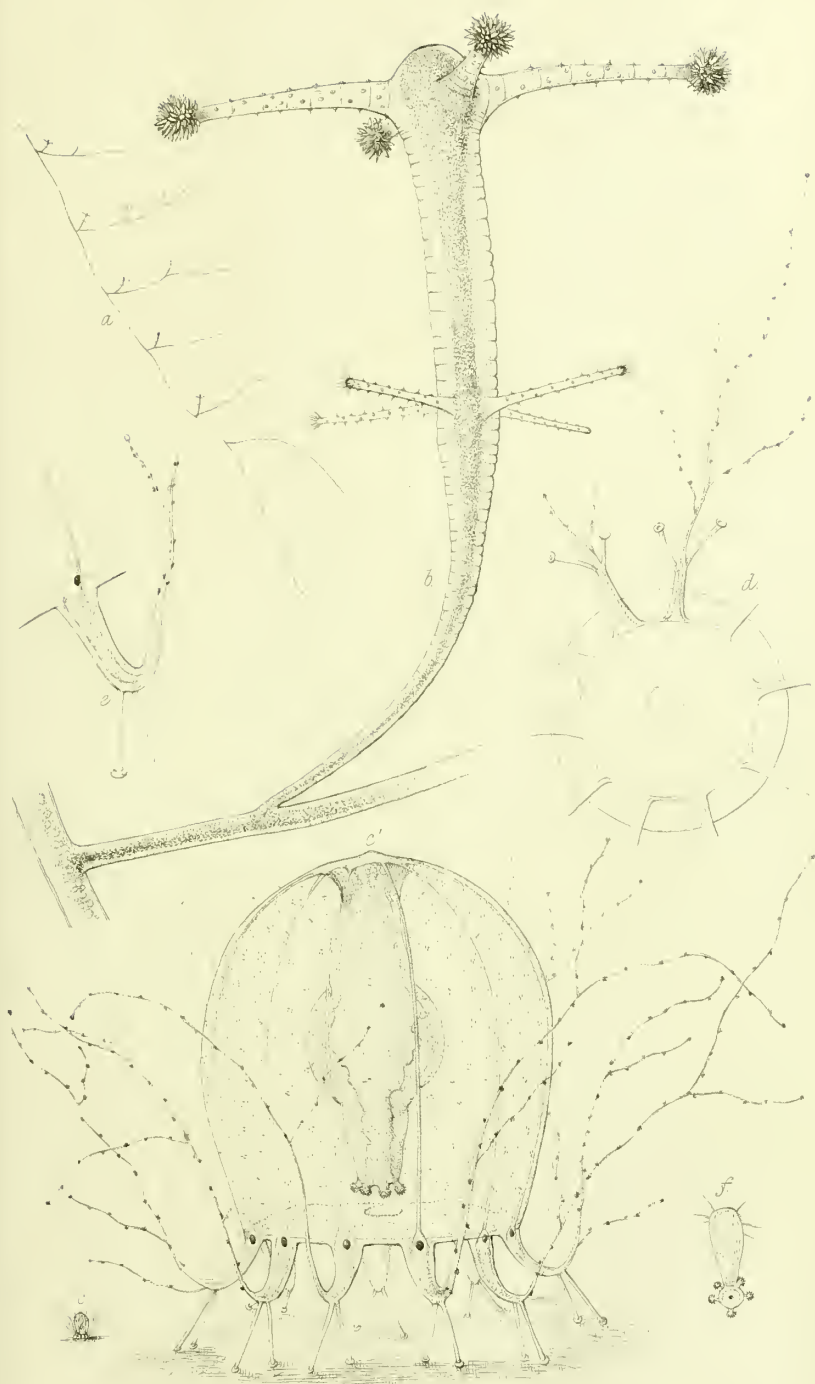


PLATE XII.

FIG.

1. *STAURIDIUM PRODUCTUM*, p. 68, a polypite, highly magnified.—1 *a*. The gonozoid.
2. *CLAVATELLA PROLIFERA*, p. 73, a polypite, highly magnified, bearing clusters of gonozoids.
2 *a*. The ambulatory gonozoid, magnified.
3. *MYRIOTHELA PHRYGIA*, p. 77, a little above nat. size.—
3'. The same, partially contracted, nat. size.
3 *a*. The embryo, magnified. After Alder.—3 *b* and 3 *d*. The gonophore, magnified.—3 *c*. A tentacle, magnified.

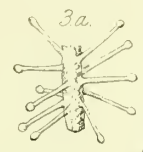
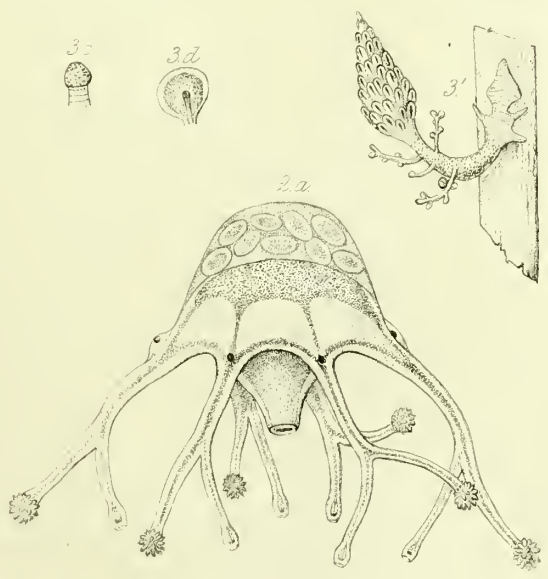
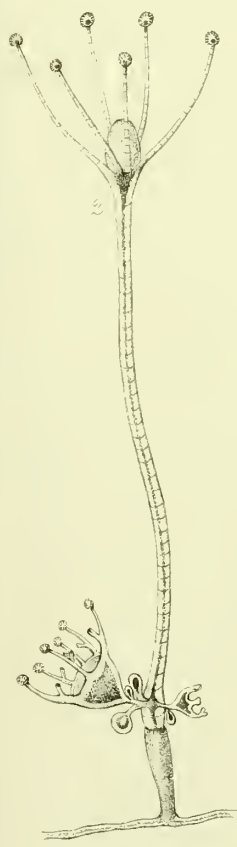
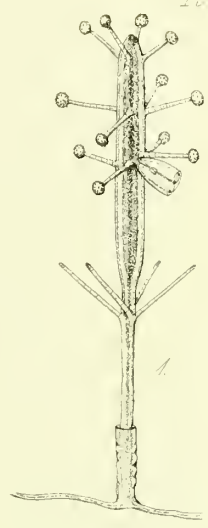
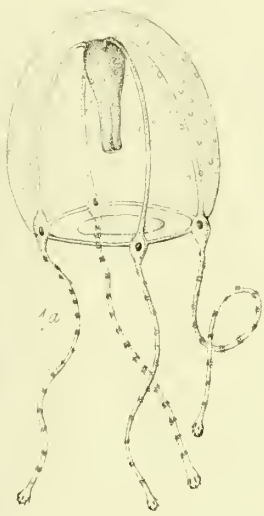


PLATE XIII.

FIG.

a. EUDENDRIUM RAMOSUM, p. 82, nat. size.

b. A portion, magnified.

c. Ditto, more highly magnified.

From drawings by Mr. Tuffen West.



PLATE XIV.

FIG.

1. *EUDENDRIUM ARBUSCULA*, p. 84, nat. size.

1 *a*. Male gonophore, magnified. This figure is after Wright.

2. *EUDENDRIUM CAPILLARE*, p. 84, nat. size.

3. *EUDENDRIUM INSIGNE*, p. 86, nat. size.

3 *a*. A polypite, highly magnified.

3 *b*. A polypite with male gonophores.

4. *GARVEIA NUTANS*, p. 102, nat. size.

4 *a*. A polypite, magnified.

4 *b*. Gonophore, magnified.

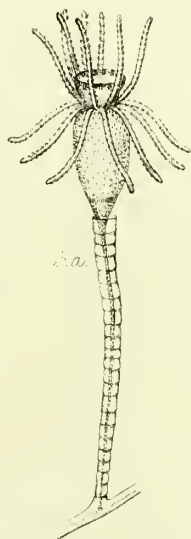
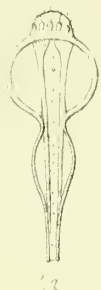


PLATE XV.

FIG.

1. *EUDENDRIUM ANNULATUM*, p. 83, nat. size.

1 *a*. The extremity of a branch, magnified.—1 *b*. A portion of one of the larger stems. These figures are after Alder.

2. *BIMERIA VESTITA*, p. 103, nat. size.

2 *a*. A portion bearing a gonophore, magnified.—2 *b*. A tentacle, magnified to show the membranous sheath. After Wright.

3. *SYNCORYNE PULCHELLA*, p. 57, and Appendix, p. 319, magnified.—3 *a*. A tentacle, magnified. From drawings by the Author.

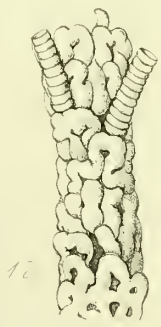
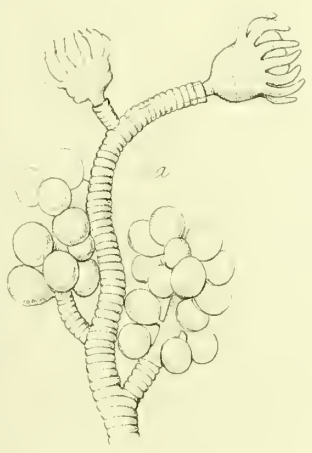
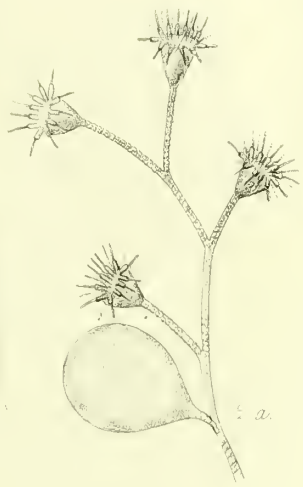


PLATE XVI.

FIG.

1. *ATRACTYLIS ARENOSA*, p. 88, nat. size.

1 *a*. Ditto, magnified.—1 *b*. The ovary after the rupture of the gonophore. From drawings by the Author.

2. *PERIGONIMUS REPENS*, p. 90, on an opereulum, nat. size.

2 *a*. Polypites, magnified.—2 *b*. The gonozoid, magnified. From drawings by Mr. Alder.

3. *PERIGONIMUS SERPENS*, p. 95, highly magnified. From a drawing by the Author.

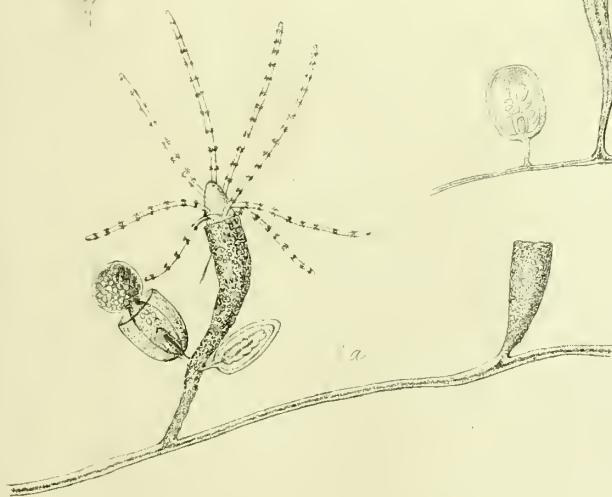
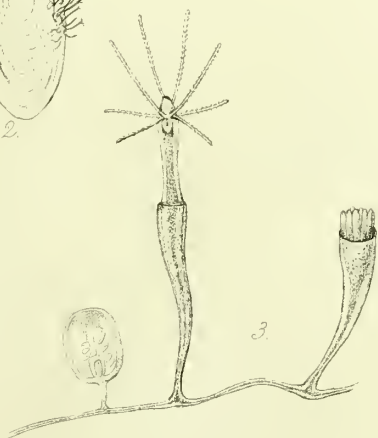
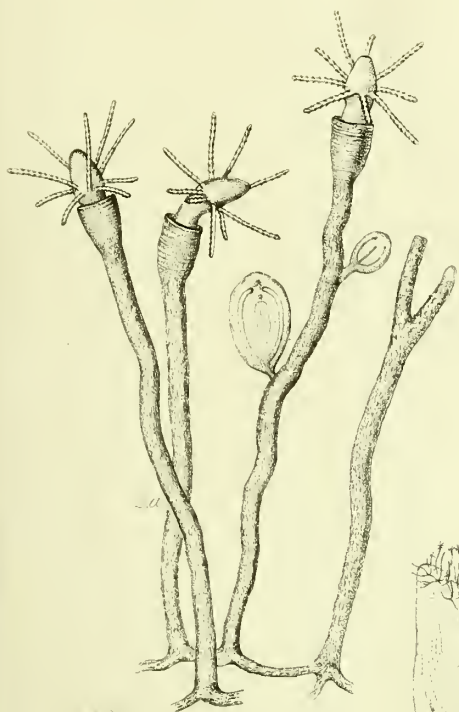
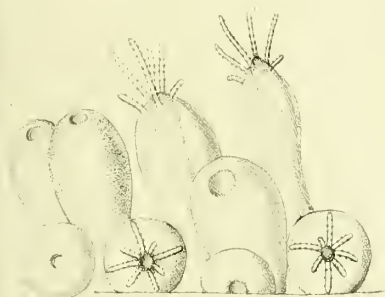


PLATE XVII.

FIG.

1. *PERIGONIMUS SESSILIS*, p. 93, magnified.
- 1 *a*. A single polypite, more highly magnified. After Dr. Strethill Wright.
2. *PERIGONIMUS PALLIATUS*, p. 93, magnified. After Dr. Strethill Wright.
3. *PERIGONIMUS* (?) *LINEARIS*, p. 96, nat. size.
- 3 *a*. The same, magnified.—3 *b*. The gonozoid. After Alder.
4. *PERIGONIMUS REPENS* (young), p. 90, magnified. From a drawing by Mr. Alder.



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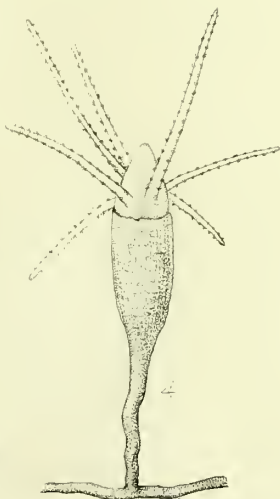
1a



3b



3a



4



PLATE XVIII.

FIG.

1. *DICORYNE CONFERTA*, p. 105, nat. size.

1 *a*. The same, magnified.—1 *b*. The gonozooid (female), magnified. After Alder.

2. *HETEROCORDYLE CONYBEAREI*, p. 107, a colony, of the nat. size, on shell.

2 *a*. A portion, magnified.—2 *b*. The gonophore, magnified. After Allman.



PLATE XIX.

FIG.

1. *HYDRANTHEA MARGARICA*, p. 100, magnified.
 - 1 *a*. One of the tentacles bearing a cluster of thread-cells, magnified.—1 *b*. One of the branched vessels of the sporosac.—1 *c*. Bean-shaped thread-cells, magnified. From drawings by the Author.
2. *BOUGAINVILLIA RAMOSA*, p. 109, nat. size. From a drawing by Mr. Tuffen West.
 - 2 *a*. A branchlet, magnified, to show the eup-like expansion of the polypary around the polypite (T. H.).—2 *b*. A branchlet, bearing a gonophore, magnified (T. H.).—2 *c*. The gonozoid, at the time of detachment, highly magnified. After Van Beneden.
3. *BOUGAINVILLIA* ? species, p. 112, nat. size.
 - 3 *a*. The same, magnified. From drawings by the Author.



PLATE XX.

FIG.

TUBULARIA INDIVISA, p. 115.

a. Nat. size.—*b.* A cluster of gonophores, magnified.—
c, d. The embryo shortly after its exclusion.



PLATE XXI.

FIG.

1. *TUBULARIA LARYNX*, p. 118, nat. size. The Author.

1 *a*. A polypite, magnified. From a drawing by Mr. Alder.

2. *TUBULARIA CORONATA*, p. 119, nat. size.

2 *a*. A cluster of gonophores, magnified. The Author.

2 *b*. A single gonophore, highly magnified, to show the contained embryo. After Van Beneden.

3. *TUBULARIA BELLIS*, p. 122, nat. size.

3 *a*. A cluster of gonophores, magnified. The Author.

4. *ECTOPLEURA DUMORTIERII*, p. 124, nat. size. The Author.

4 *a*. The gonozooid, magnified. After Van Beneden.

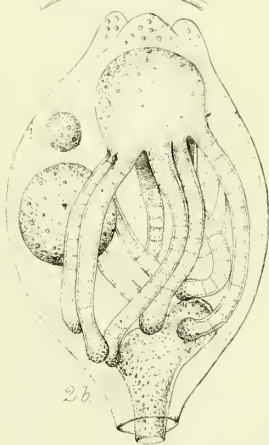
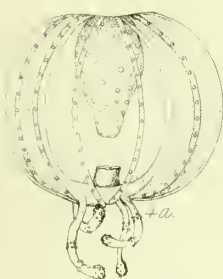


PLATE XXII.

FIG.

1. *TUBULARIA SIMPLEX*, p. 121, nat. size.

1 *a*. The polypite, magnified. After Alder.

2. *CORYMORPHA NUTANS*, p. 127, nat. size. From a drawing by the Author.

2 *a*. The gonozooid, magnified. After Hodge.

3. *CORYMORPHA NANA*, p. 130, magnified.

3 *a*. The gonozooid after liberation, magnified.—3 *b*. A group of gonozooids before liberation.—3 *c*. Another group, differently shaped. After Alder.

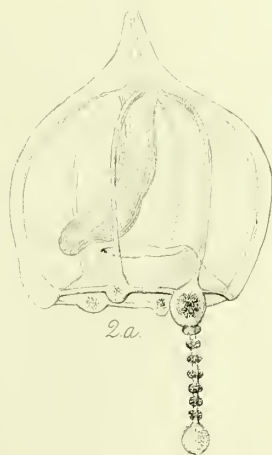
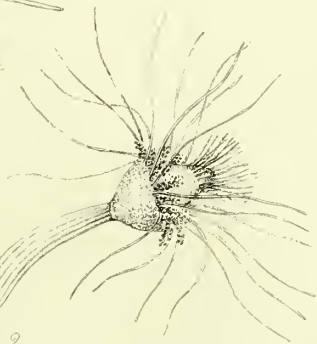
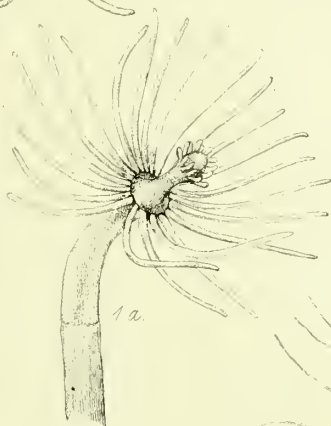
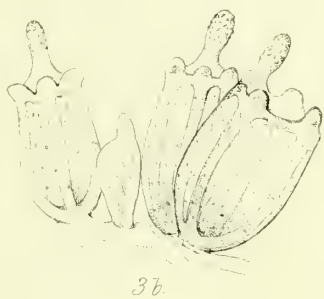
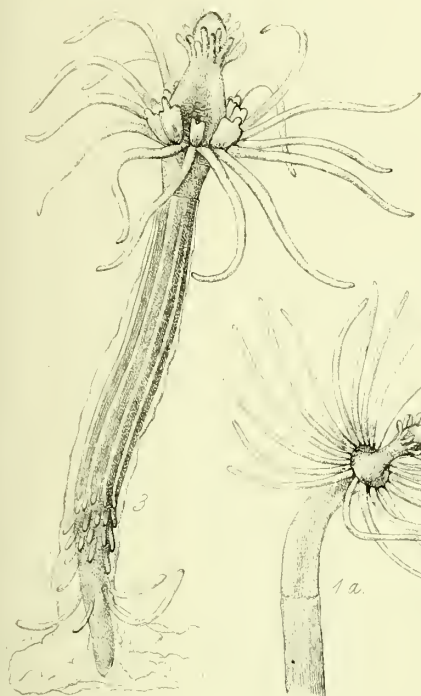


PLATE XXIII.

FIG.

1. *VORTICLAVA HUMILIS*, p. 132, nat. size.

1 *a*. The same, magnified.—1 *b*. One of the capitate tentacles, much enlarged. After Alder.

2. *VORTICLAVA PROTEUS*, p. 133, contracted.

2 *a*, 2 *b*, 2 *c*, 2 *d*. The same, in different states.—2 *e*. Diagram of the tissues of the polypite. After Dr. Strethill Wright.

3. *ACHARADRIA LARYNX*, p. 134, magnified.

3 *a*. An immature polypite. After Dr. Wright.

4. *PODOCORYNE PROBOSCIDEA*, p. 317 (Appendix), highly magnified.

4 *a*. A gonophore.—4 *b*. The oral extremity of the proboscis of the polypite.—4 *c*. A tentacle when contracted.—4 *d*. One of the marginal tentacles of the gonozooid: all magnified. From drawings by the Author.

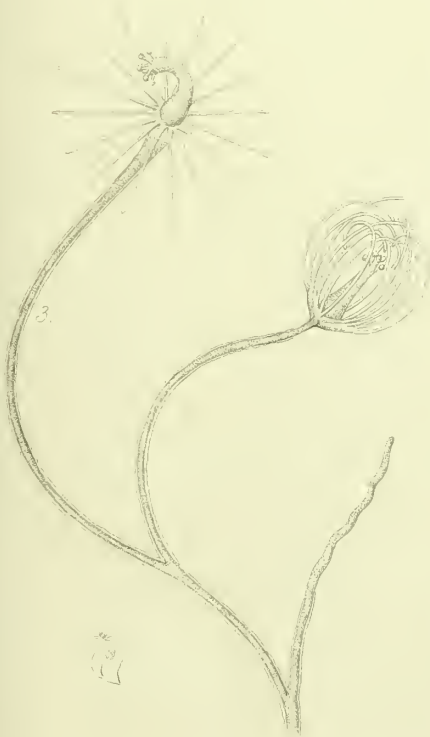
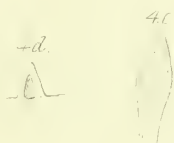
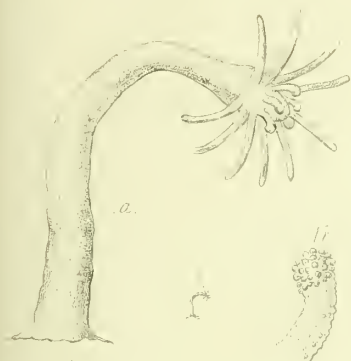


PLATE XXIV.

FIG.

1. *CLYTIA JOHNSTONI*, p. 143, magnified.

1 *a*. The gonozoid.

2. *CAMPANULARIA VOLUBILIS*, p. 160, magnified.

3. *CAMPANULARIA HINCKSI*, p. 162, magnified.

3 *a*. Ditto, with the capsule, magnified.



PLATE XXV.

FIG.

1. *OBELIA GENICULATA*, p. 149, nat. size.

1 *a*. A shoot, magnified.

2. *GONOTHYRÆA LOVÉNI*, p. 181, nat. size.

2 *a*. A shoot, magnified, bearing female gonophores.

2 *b*. A capsule, with male gonophores, magnified.

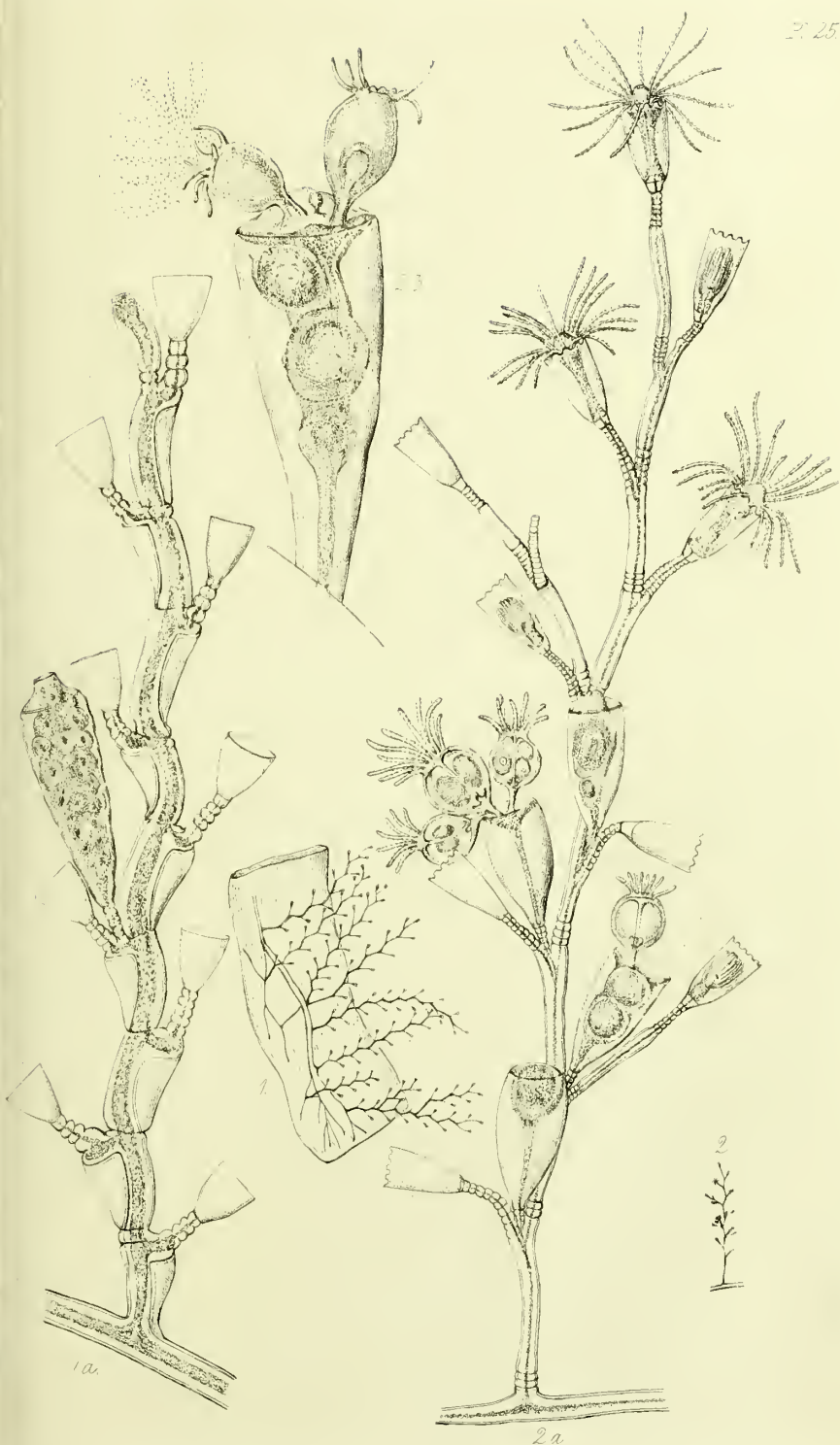


PLATE XXVI.

FIG.

1, 1'. *OBELIA GELATINOSA*, p. 151, nat. size.

1 *a*. A portion, magnified. From drawings by Mr. Tuffen
West.

2, 2 *a*. *CAMPANULARIA RARIDENTATA*, p. 176, magnified.
From drawings by Mr. Alder.

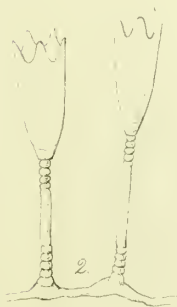
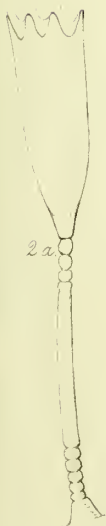
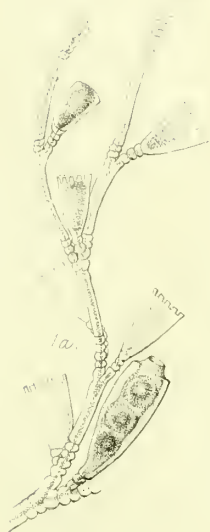


PLATE XXVII.

FIG.

OBELIA LONGISSIMA, p. 154.

a. Nat. size. From a drawing by Mr. T. West.

b. A portion enlarged (T. H.).

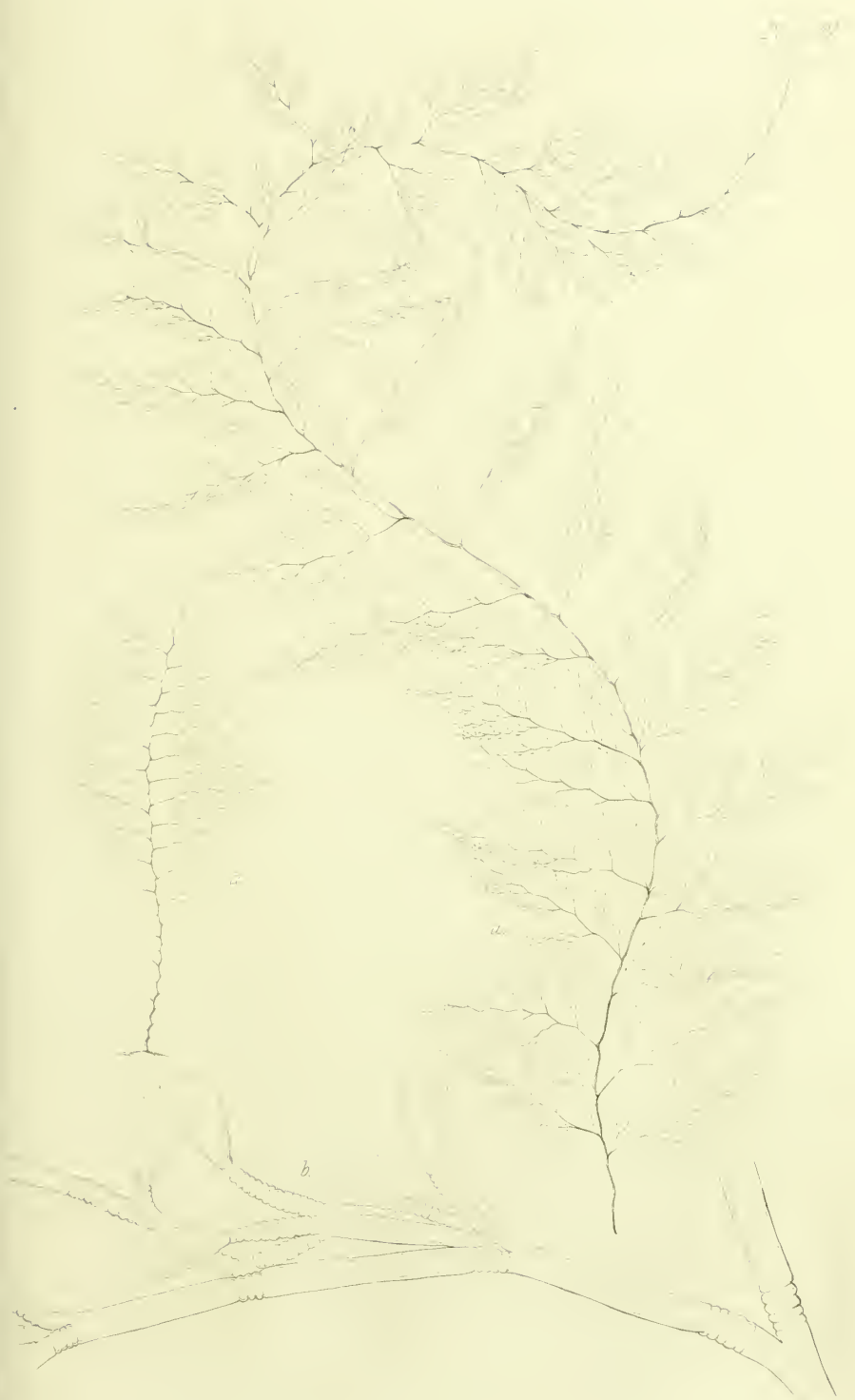


PLATE XXVIII.

FIG.

1. *OBELIA DICHOTOMA*, p. 156, nat. size. From a drawing by Mr. T. West.
1 *a*. A shoot, magnified (T. H.).—1 *b*. A capsule, magnified (T. H.).—1 *c*, 1 *d*. The gonozoid. From drawings by Mr. Alder.
2. *CAMPANULARIA EXIGUA*, p. 172, a shoot, magnified (T. H.).
2 *a*. The gonotheca. After Gegenbaur.



PLATE XXIX.

FIG.

OBELIA FLABELLATA, p. 157.

a, b. Nat. size. From drawings by Mr. Tuffen West.

c. A shoot, magnified (T. H.).



PLATE XXX.

FIG.

1. *OBELIA PLICATA*, p. 159, nat. size. From a drawing by Mr. Tuffen West.

1 *a*. A shoot, magnified (T. H.).

2. *CAMPANULARIA NEGLECTA*, p. 171, a single calycle, magnified.

2 *a*. A portion, magnified, showing the polypite. From drawings by Mr. Alder.—2 *b*, 2 *c*. The gonotheca, magnified (T. H.).—2 *d*. The same, with extra-capsular marsupium (T. H.).



PLATE XXXI.

FIG.

1. *CAMPANULARIA INTEGR*A, p. 163, magnified. After Tuffen West.

1 *a*, 1 *b*. The gonotheca, magnified to show the internal structure (T. H.).

2. *CAMPANULARIA CALICULATA*, p. 164, on red weed, nat. size.

2 *a*. The same, magnified.—2 *b*. Calyces, highly magnified to show the structure and differences in shape. After Tuffen West.—2 *c*. A calyele, drawn to the Author's scale for comparison with other species (T. H.).—2 *d*. The gonotheca, magnified. After Allman.

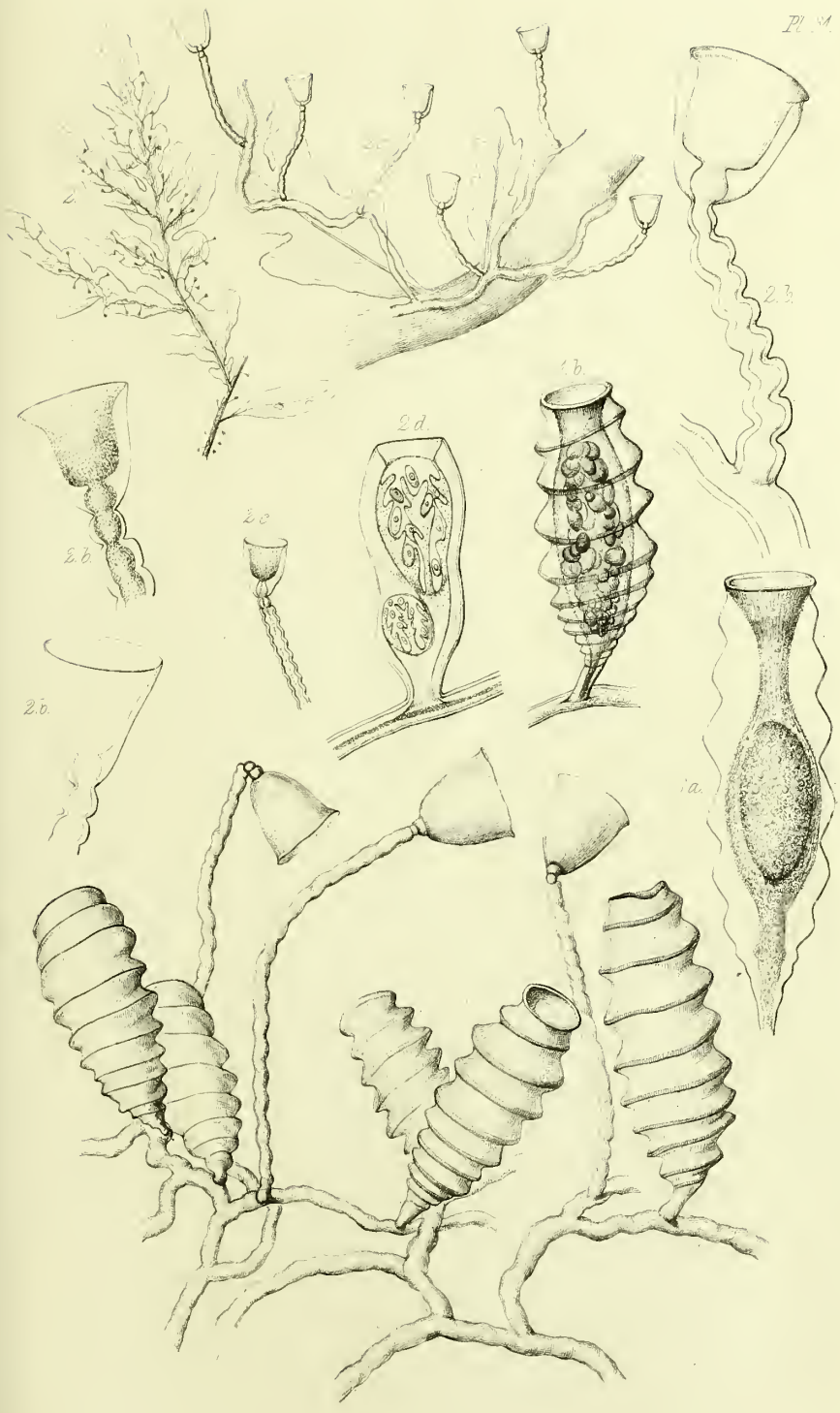


PLATE XXXII.

FIG.

1. *CAMPANULARIA VERTICILLATA*, p. 167, nat. size. From a drawing by Mr. Tuffen West.
1 *a*. The same, magnified (T. H.).
2. *LOVENELLA CLAUSA*, p. 177, magnified. From a drawing by the Author.
3. *CAMPANULARIA?* *FRAGILIS*, p. 175, nat. size.
3 *a*. A shoot of the same, magnified.—3 *b*. A single caly-
cle, more highly magnified. From drawings by
the Author.



PLATE XXXIII.

FIG.

CAMPANULARIA FLEXUOSA, p. 168.

- a.* Natural size.
- b.* A shoot, magnified, bearing male capsules.
- c.* A shoot with female capsules.



PLATE XXXIV.

FIG.

1. *CAMPANULARIA ANGULATA*, p. 170, nat. size.

1 *a*. A portion, magnified. After Tuffen West.

2. *LEPTOSCYPHUS TENUIS*, p. 197, magnified. From a
drawing by Prof. Allman.

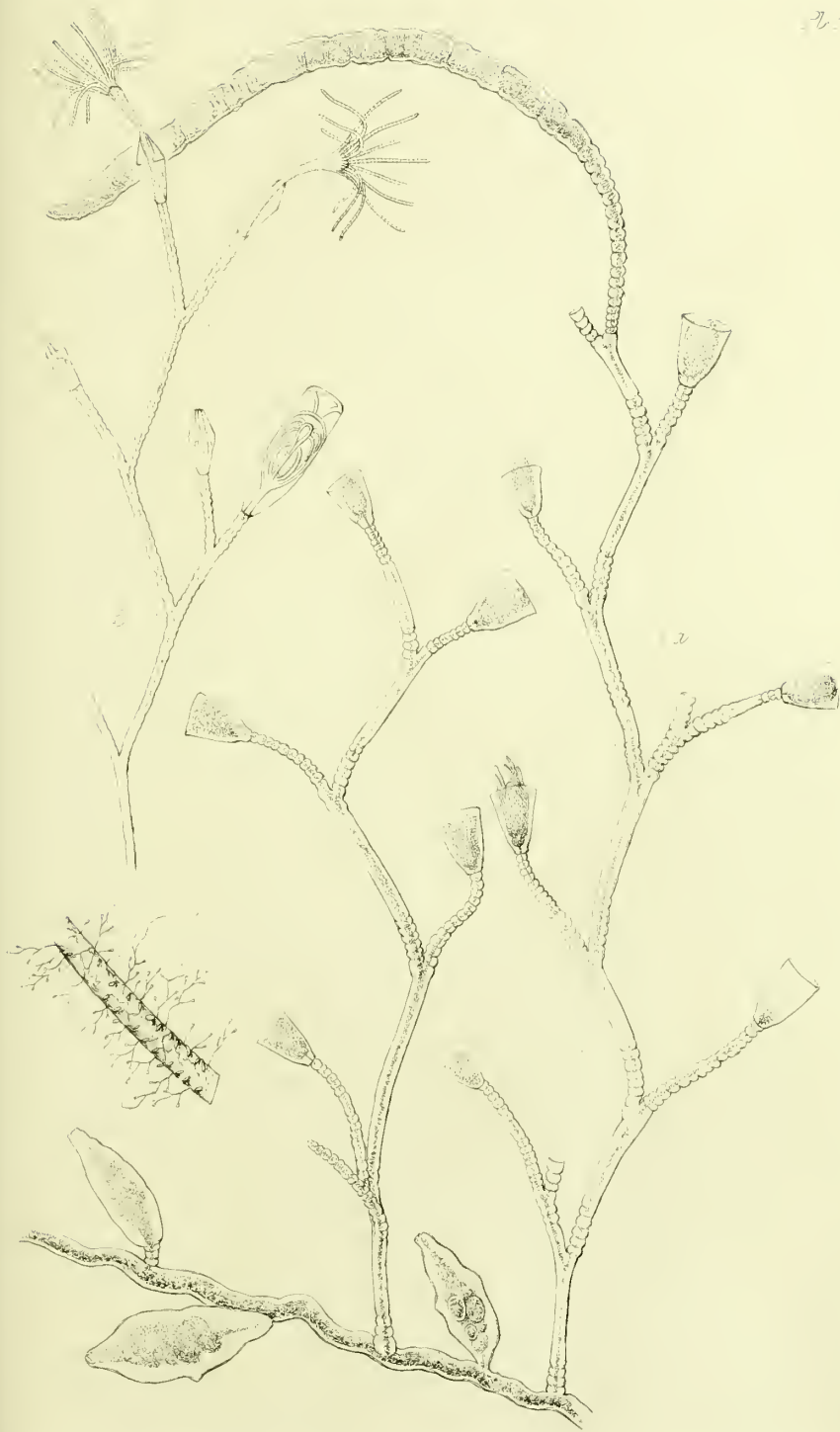


PLATE XXXV.

FIG.

1. *CAMPANULARIA?* *GIGANTEA*, p. 174, nat. size.

1 *a*, 1 *b*. Calyces magnified. These two figures are drawn to the same scale.

2. *GONOTHYRÆA?* *HYALINA*, p. 184, nat. size.

2 *a*. A shoot, magnified.



PLATE XXXVI.

FIG.

1. GONOTHYRÆA GRACILIS, p. 183, nat. size.
 - 1 *a.* The same, magnified. From drawings by the Author.
 - 1'. G. GRACILIS, nat. size. After Sars.—1 *b.* The gonotheca (female). After Sars.
2. CAMPANULINA TURRITA, p. 190, magnified. From a drawing by Prof. Wyville Thomson.



PLATE XXXVII.

FIG.

CAMPANULINA ACUMINATA, p. 187.

a. Nat. size.—*b.* A shoot, magnified.—*c.* The gonozoid.
After Dr. Strethill Wright.



PLATE XXXVIII.

FIG.

1. *CAMPANULINA REPENS*, p. 189, magnified.

1 *a*. The gonozooid. From drawings by Prof. Allman.

2. *ZYGODACTYLA VITRINA*, p. 192, the polypites, magnified.
After Wright.

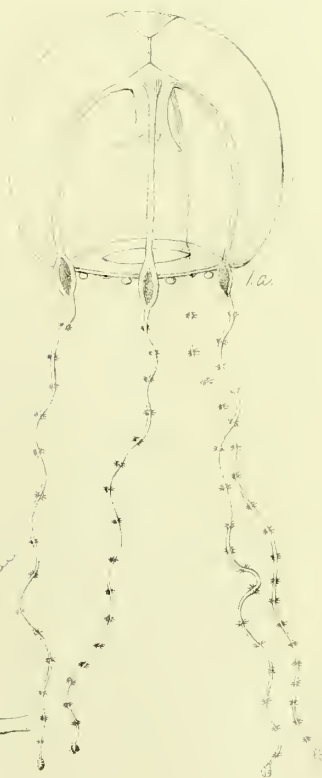
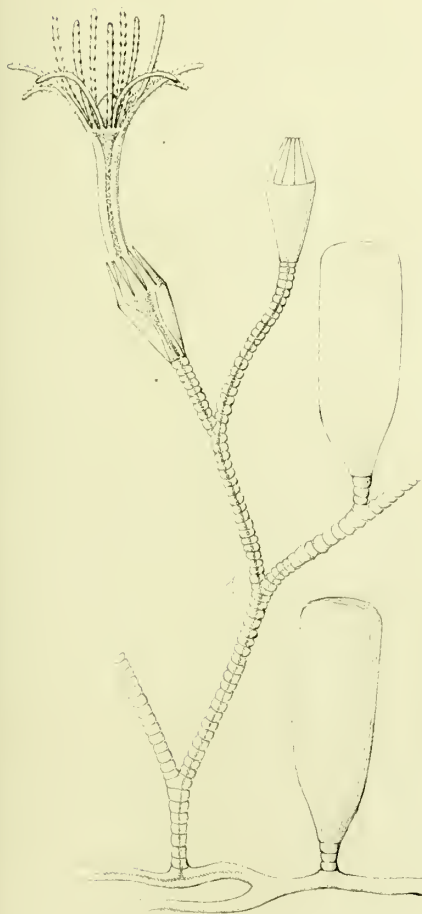
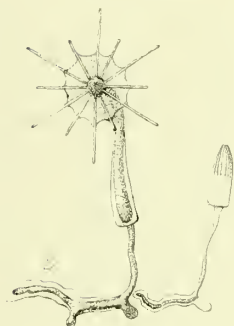
2 *a*. The gonozooid. After Gosse.—2 *b*. The oral extremity of the manubrium, magnified, showing the fimbriated lips. After Gosse.



2a.



2b.



1a.

PLATE XXXIX.

FIG.

1. OPERCULARELLA LACERATA, p. 194, nat. size.

1 *a*. A shoot, magnified. The Author.—1 *b*, 1 *c*. The male capsules. After Wright.

2. CALYCELLA SYRINGA, p. 206, nat. size.

2 *a*. The same, magnified.

3. CALYCELLA FASTIGIATA, p. 208, nat. size.

3 *a*. The same, magnified.

4. CUSPIDELLA HUMILIS, p. 209, magnified to the same scale as the preceding.

4 *a*. The same, more highly magnified.



PLATE XL.

FIG.

1. *LAFOËA PARVULA*, p. 203, nat. size.
1 *a*, 1 *b*. The same, magnified. After Tuffen West.
2. *LAFOËA POCILLUM*, p. 204, magnified.—2 *a*, 2 *b*, 2 *c*. The same, more highly magnified.
3. *LAFOËA PYGMÆA*, p. 205, magnified.
3 *a*, 3 *b*. The same, more highly magnified.
4. *CUSPIDELLA GRANDIS*, p. 210, highly magnified*.
5. *CUSPIDELLA COSTATA*, p. 210, drawn to the same scale as *CUSPIDELLA GRANDIS*.
5 *a*. The same, more highly magnified.

* This figure is drawn to the same scale as the larger figure (4 *a*) of *CUSPIDELLA HUMILIS* on Plate XXXIX.

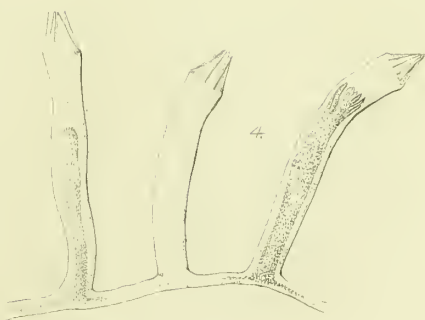
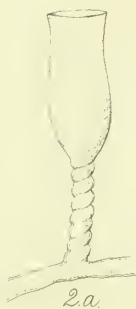
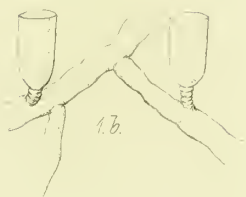


PLATE XLI.

FIG.

1. *LAFOËA DUMOSA*, p. 200, magnified.
 - 1 *a.* The same, a single calycle, more highly magnified (T. H.)
2. *LAFOËA FRUTICOSA*, p. 202, nat. size. After Alder.
 - 2 *a.* A portion, magnified (T. H.).—2 *b.* The northern form of *L. fruticosa*, magnified (T. H.).
3. *SALACIA ABIETINA*, p. 212, nat. size.
 - 3 *a.* The same, magnified.—3 *b.* A portion of the stem, more highly magnified. After Alder.
4. *FILELLUM SERPENS*, p. 214, magnified.
 - 4 *a.* A group of calyces. From drawings by Mr. Alder —
 - 4 *b.* A single calycle. From a sketch by Mr. Busk.
5. *COPPINIA ARCTA*, p. 219, nat. size. From a drawing by the Author.



PLATE XLII.

FIG.

HALECIUM HALECINUM, p. 221.

a, a'. Nat. size. From drawings by Mr. T. West.

b. A portion, magnified, showing the polypites.

c. Capsules with male gonophores.

d. Capsules with female gonophores. From drawings by
the Author.



PLATE XLIII.

FIG.

1. *HALECIUM MURICATUM*, p. 223, nat. size. From a drawing by Mr. T. West.
1 *a*. Portions, magnified (T. H.).—1 *b*. Gonothea (T. West).
2. *HALECIUM BEANII*, p. 224, nat. size. From a drawing by Mr. Tuffen West.
2 *a*. Portions, magnified.—2 *b*. A branch with male capsules.—2 *c*. A branch with female capsules. From drawings by the Author.



PLATE XLIV.

FIG.

1. *HALECIUM LABROSUM*, p. 225, nat. size.

1 *a*. A portion, magnified, with male capsules. After Alder.

2. *HALECIUM SESSILE*, p. 229, nat. size.

2 *a*. A portion, magnified, showing the great length of the polypite. From drawings by Mr. Alder.

3. *HALECIUM BEANII* (?), p. 324 (Appendix), nat. size.

3 *a*. A portion of the stem, enlarged.—3 *b*. A capsule.—

3 *c*. A single calycle, more highly magnified. From drawings by the Author.



PLATE XLV.

FIG.

1. *HALECIUM TENELLUM*, p. 226, nat. size.

1 *a*, 1 *b*. Portions, magnified.—1 *c*. The gonotheca.

2, 2'. *OPHIODES MIRABILIS*, p. 231, magnified.

2 *a*. One of the snake-like appendages.—2 *b*. A portion of the intertentacular web, with clusters of thread-cells between the arms.—2 *c*. A calycle, magnified, showing the diaphragm on which the polypite rests.—2 *d*. The gonotheca.

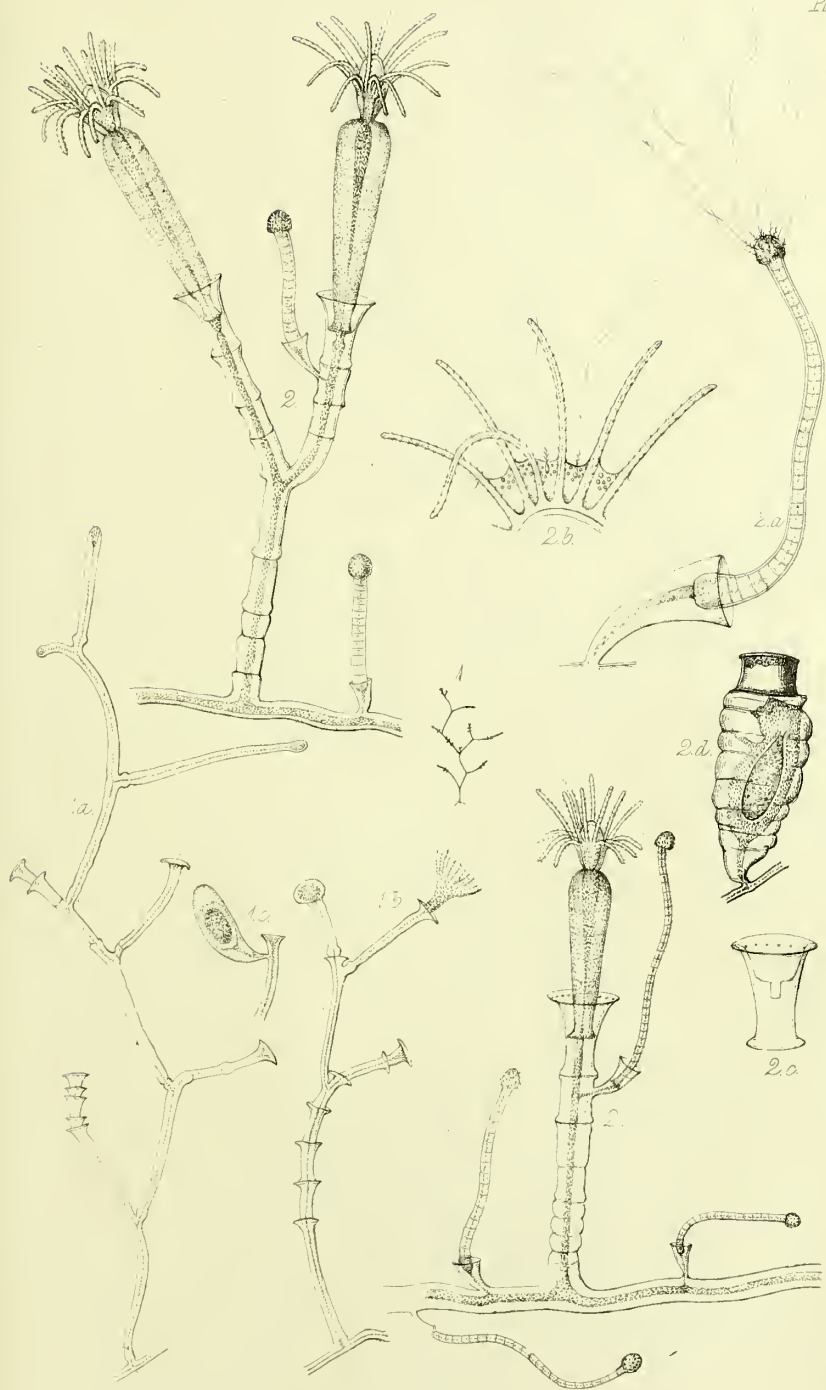


PLATE XLVI.

FIG.

1. *SERTULARELLA POLYZONIAS*, p. 235, nat. size. From a drawing by Mr. T. West.

1 *a*. A portion, magnified (T. H.).—1 *b*. The gonotheca (T. H.).

2. *SERTULARELLA GAYI*, p. 237, nat. size.

2 *a*. A portion, enlarged. From drawings by Mr. Alder.

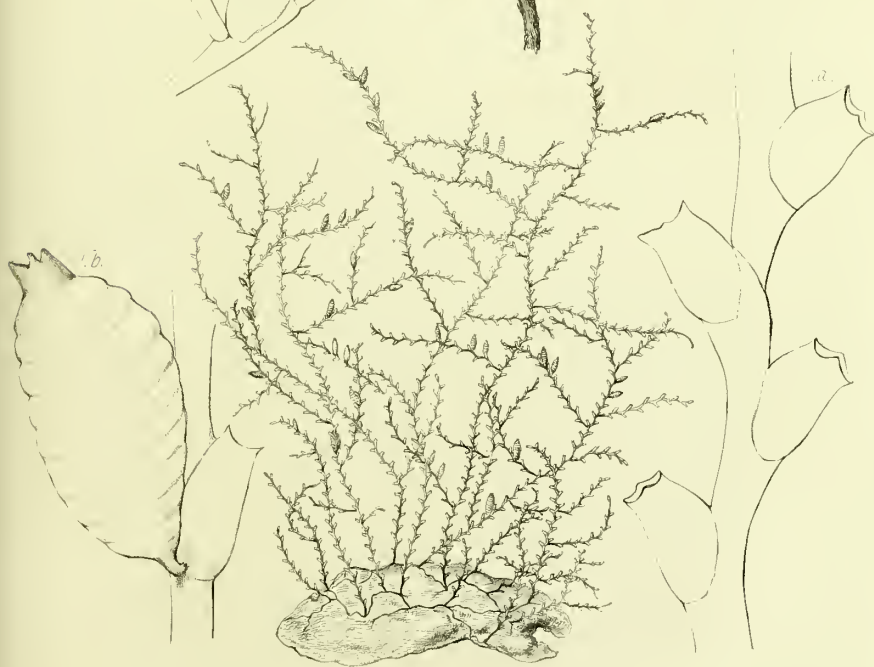
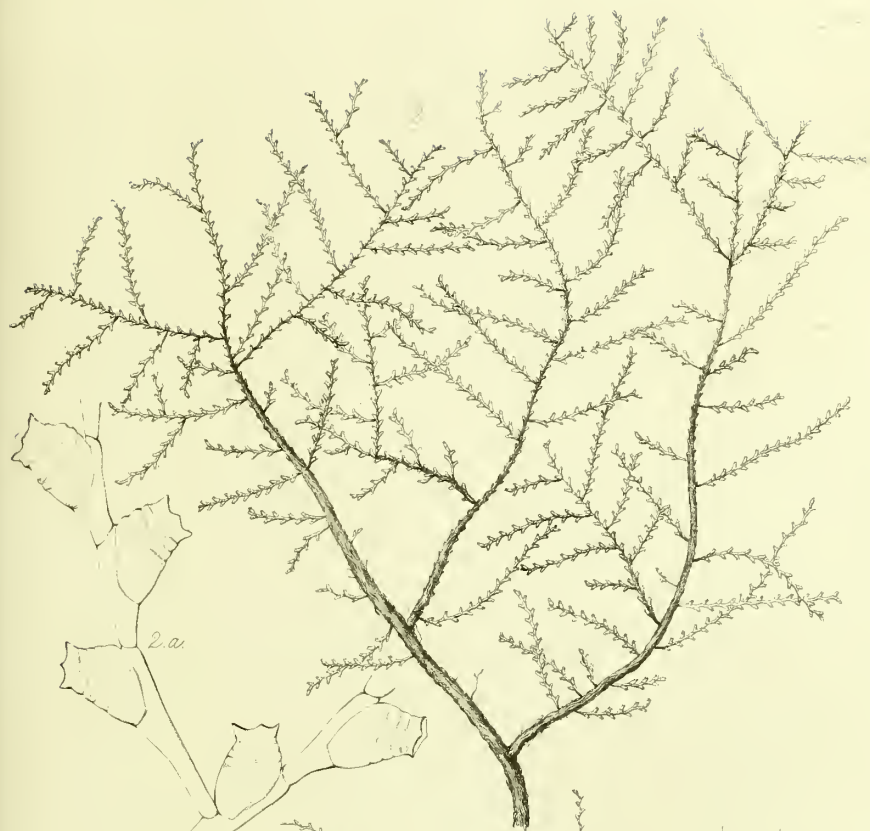


PLATE XLVII.

FIG.

1. *SERTULARELLA TRICUSPIDATA*, p. 239, nat. size.

1 *a*. The same, enlarged. After Alder.

2. *SERTULARELLA RUGOSA*, p. 241, nat. size.

2 *a*. The same, magnified.—2 *b*. A portion, more highly magnified. From drawings by Mr. Tuffen West.

3. *SERTULARELLA TENELLA*, p. 242, nat. size.

3 *a*. The same, magnified.—3 *b*. A single calycle, more highly magnified.—3 *c*. The gonotheca. After Alder.

4. *SERTULARELLA FUSIFORMIS*, p. 243, nat. size.

4 *a*. A portion, magnified.—4 *b*. The gonotheca. From drawings by the Author.



PLATE XLVIII.

FIG.

1. *DIPHASIA ROSACEA*, p. 245, nat. size.

1 *a.* A portion with male capsules, magnified. From drawings by Mr. Tuffen West.—1 *b.* Female capsule, magnified (T. H.). Ditto, more highly magnified to show the gonophores and internal marsupium (T. H.).—1 *c.* A capsule in an early stage of development (T. H.).

2. *DIPHASIA ALATA*, p. 258, nat. size.

2 *a.* A branch, magnified. — 2 *b.* The capsule (male). After Tuffen West.



PLATE XLIX.

FIG.

1. *DIPHASIA ATTENUATA*, p. 247, nat. size.

1 *a*. Part of a branch, magnified.—1 *b*. The male capsule.

1 *c*. The female capsule.—1 *d*. One of the tendril-like extremities of the shoots.

2. *DIPHASIA FALLAX*, p. 249, nat. size.

2 *a*. Part of a branch, magnified.—2 *b*. The capsule (female).

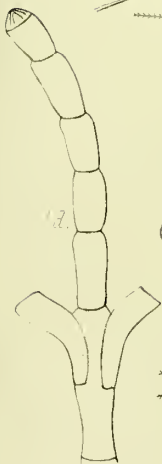
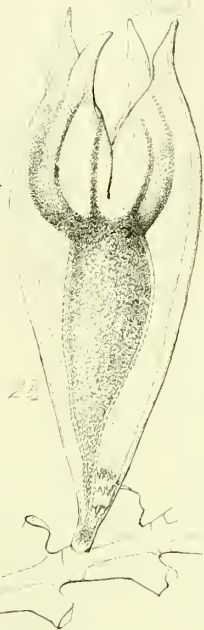


PLATE L.

FIG.

1. *DIPHASIA PINASTER*, p. 252, nat. size.

1 *a*. A portion bearing a male capsule, magnified.—1 *b*. The female capsule, magnified.

2. *SERTULARIA FUSCA*, p. 272, nat. size.

2 *a*. Calyces, magnified.—2 *b*. Gonothecæ. The last figure is after Johnston.



PLATE LI.

FIG.

DIPHASIA TAMARISCA, p. 254.

- a.* Natural size.
- b.* Calycles, magnified.
- c.* A branch with male capsules.
- d.* A branch with female capsules.



PLATE LII.

FIG.

DIPHASIA PINNATA, p. 255.

a. Natural size (male).

b. Ditto (female).

c. Calycles, magnified.

d. Male capsule.

e. Female capsule.

From drawings by Mr. Tuffen West.



PLATE LIII.

FIG.

1. *SERTULARIA PUMILA*, p. 260, nat. size.

1 *a*. Portion, magnified.—1 *b*. The capsule, magnified.—
1 *c*. The same, in a more advanced stage, with the
external marsupium. After Lindström. The other
figures are by the Author.

2. *SERTULARIA GRACILIS*, p. 262, nat. size.

2 *a*, 2 *a'*. Portions, enlarged.—2 *b*. The capsule. From
drawings by the Author.

3. *SERTULARIA FILICULA*, p. 264, nat. size. From a draw-
ing by Mr. T. West.

3 *a*. Portion, magnified (T. H.).—3 *b*. The capsule. After
Ellis.

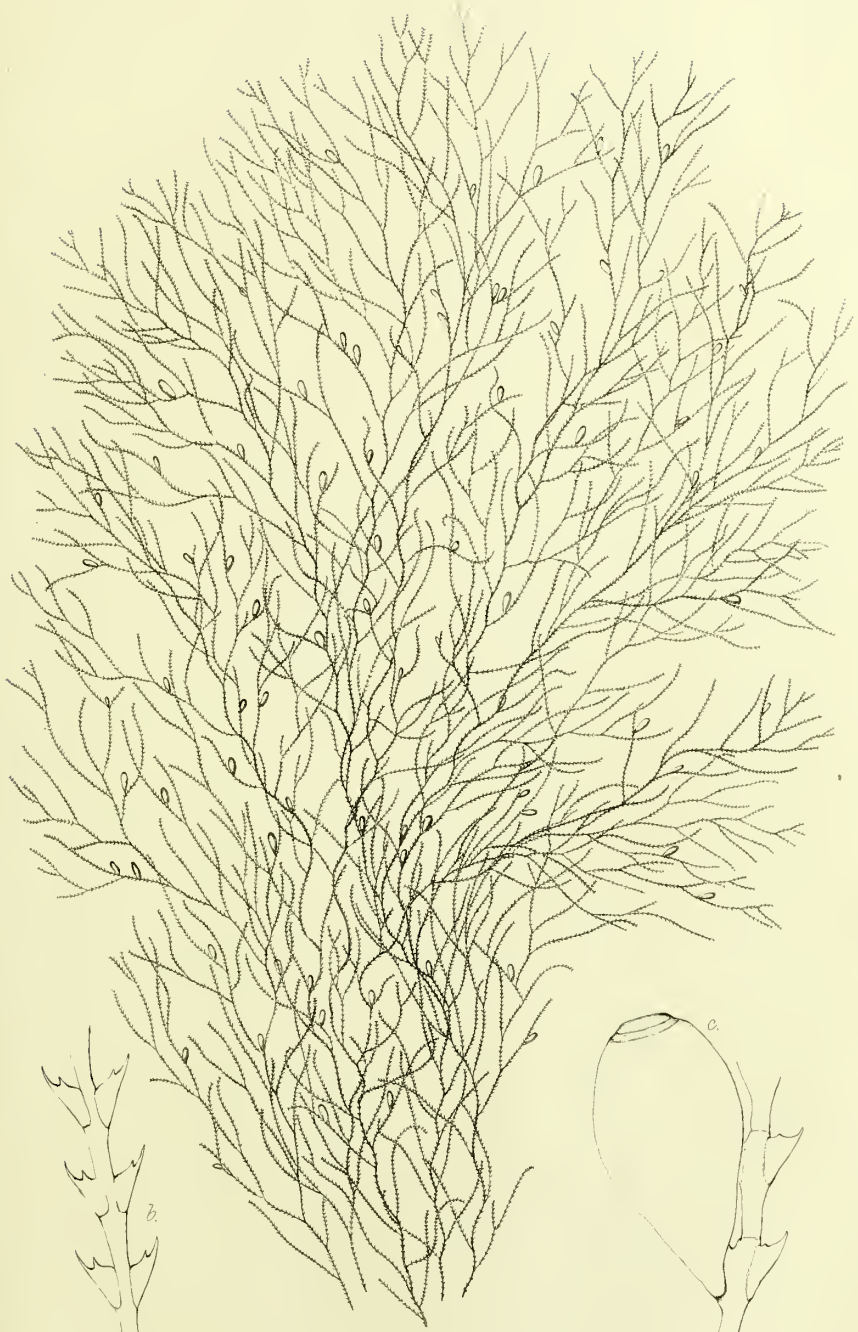


PLATE LIV.

FIG.

SERTULARIA OPERCULATA, p. 263.

- a.* Nat. size. From a drawing by Mr. Tuffen West.
- b.* Calyces, magnified (T. H.).
- c.* The capsule (T. H.).



a.



b.



c.

PLATE LV.

FIG.

SERTULARIA ABIETINA, p. 266.

a. Nat. size.

b. A portion, somewhat enlarged. From drawings by Mr.
Tuffen West.

c. Calycles, magnified (T. H.).

d. The capsule (T. H.).

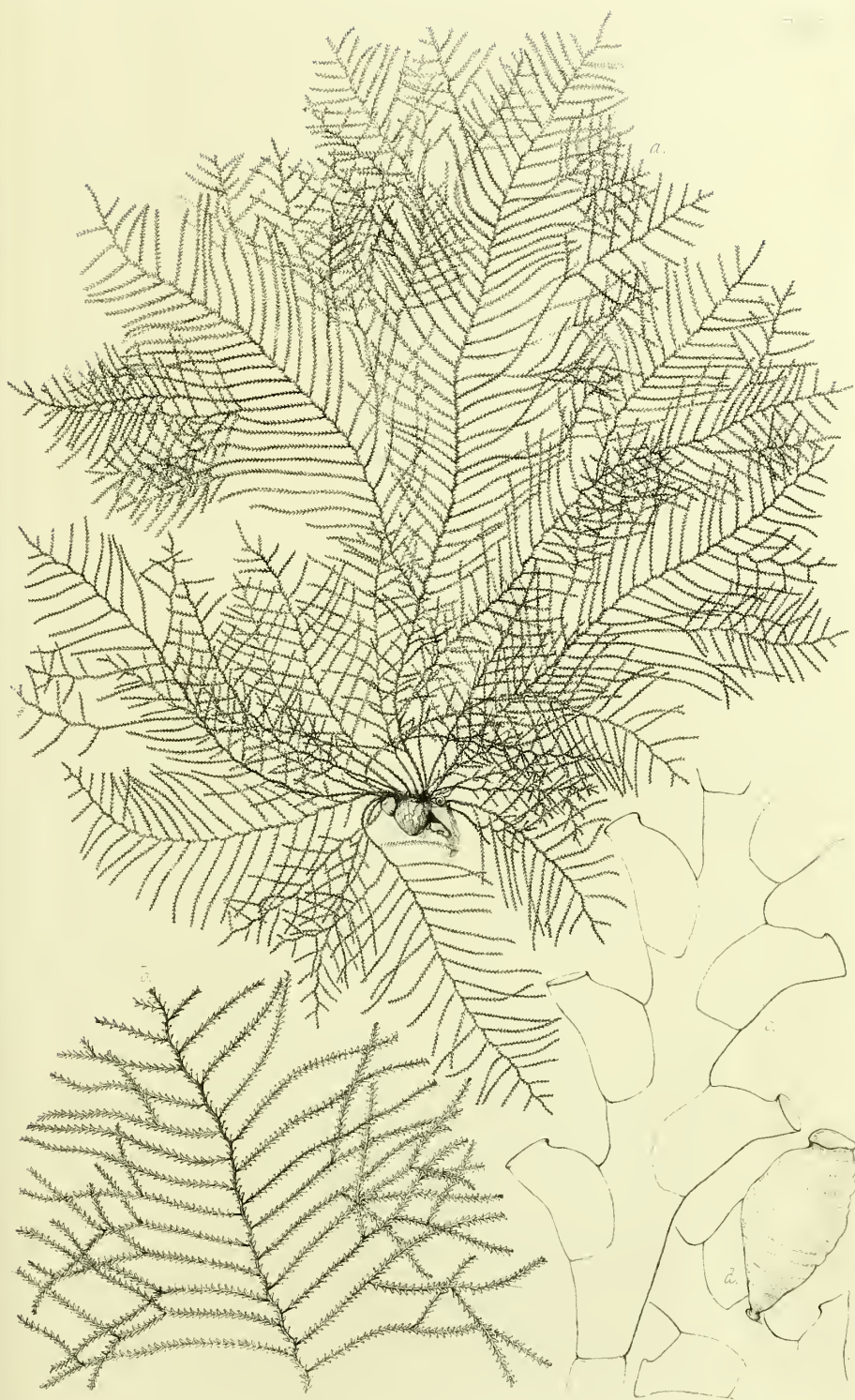


PLATE LVI.

FIG.

SERTULARIA ARGENTEA, p. 268.

a. Nat. size. From a drawing by Mr. Tuffen West.

b. A young specimen.—*c, c'.* Calyces and capsule, magnified. From drawings by the Author.



PLATE LVII.

FIG.

SERTULARIA CUPRESSINA, p. 270.

a. Nat. size. From a drawing by Mr. T. West.

b, b'. Calyces and capsule, magnified (T. H.).



PLATE LVIII.

FIG.

HYDRALLMANIA FALCATA, p. 273.

- a.* Nat. size. From a drawing by Mr. T. West.
b. Calyces, magnified.—*c.* Calyces from a young specimen.—*d.* The capsule. By the Author.



PLATE LIX.

FIG.

THUIARIA THUIA, p. 275.

- a.* Nat. size. From a drawing by Mr. Tuffen West.—*b, b'*. Calycles, enlarged (T. H.).—*c.* A group of capsules, magnified (T. H.).—*d.* The crust from which the shoot rises (T. W.).



PLATE LX.

FIG.

THUIARIA ARTICULATA, p. 277.

a. Nat. size.—*b.* Calyces, magnified.—*c.* A group of capsules, magnified.—*d.* A portion of the stem of the Shetland variety. (*Vide* p. 278.)



PLATE LXI.

FIG.

ANTENNULARIA ANTENNINA, p. 280.

a, b. Nat. size. From drawings by Mr. T. West.—*c.* A portion magnified to show the form of the calyces and arrangement of the nematophores (T. H.).—*d, d'.* The capsule (T. H.).—*e.* A section of the stem, showing the verticillate arrangement of the branchlets (T. W.).



PLATE LXII.

FIG.

ANTENNULARIA RAMOSA, p. 282.

a. Nat. size. From a drawing by Mr. T. West.—*b.* Portion, magnified (T. H.).—*c.* The capsule (T. H.).



PLATE LXIII.

FIG.

1. *AGLAOPHENIA PLUMA*, p. 286, nat. size.

1 *a*. *AGLAOPHENIA PLUMA*, var. β , nat. size. From drawings by Mr. T. West.—1 *b*. A calycle, magnified (T. H.).

2. *AGLAOPHENIA TUBULIFERA*, p. 288, nat. size. From a drawing by the Author.

2 *a*, 2 *b*. Side and front views of the calycle (T. W.).

3. *AGLAOPHENIA PENNATULA*, p. 292, nat. size.

3 *a*. Calyces, enlarged. From drawings by the Author.



PLATE LXIV.

FIG.

1. *HALECIUM PLUMOSUM*, p. 227, nat. size.

1 *a*. Portion, magnified.—1 *b*. A calycle, more highly magnified. From drawings by the Author.

2. *AGLAOPHENIA MYRIOPHYLLUM*, p. 290, nat. size. From a drawing by Mr. T. West.

2 *a*. A single calycle, magnified (T. H.).

3. The *corbula* of *AGLAOPHENIA TUBULIFERA*, magnified. From a drawing by the Author.



PLATE LXV.

FIG.

1. PLUMULARIA PINNATA, p. 295, nat. size.

1 *a*. Portion of a pinna, magnified.—1 *b*. Capsules, magnified.

2. PLUMULARIA ECHINULATA, p. 302, nat. size.

2 *a*. Stem and pinnæ, magnified.—2 *b*. A piece of the creeping stolon with capsules, magnified.

3. PLUMULARIA SIMILIS, p. 303, nat. size.

3 *a*. Stem and pinnæ, magnified.—3 *b*. Capsule *.

* This figure is drawn to a larger scale than the rest.



PLATE LXVI.

FIG.

1. PLUMULARIA SETACEA, p. 297, nat. size.

1 *a*. A portion of the stem and pinnæ, magnified, showing the axillary position of the capsule.

2. PLUMULARIA CATHARINA, p. 299, nat. size.

2 *a*. Portion, magnified.—2 *b*. The capsule (female).

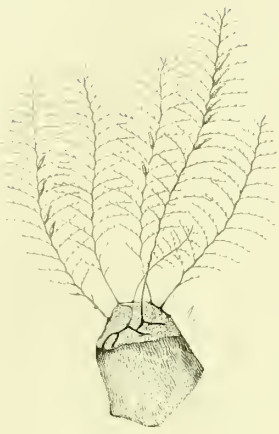


PLATE LXVII.

FIG.

1. *PLUMULARIA OBLIQUA*, p. 304, nat. size.

1 *a*. A portion of the stem, magnified, with a single pinna.
—1 *b*. A calycle, more highly magnified. The last figure is from a drawing by Mr. Busk.

2. *PLUMULARIA HALECIOIDES*, p. 306, nat. size.

2 *a*. Stem and pinnæ, magnified.—2 *b*. A portion of the compound stem.—2 *c*. The capsule.

3. *PLUMULARIA FRUTESCENS*, p. 307, nat. size.

3 *a*. Pinna, magnified, with a capsule.

